

GenCore version 4.5
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OM protein - protein search, using sw model

Run on: June 18, 2001, 15:32:46 ; Search time 46.42 Seconds
(Without alignments)
758.135 Million cell updates/sec

Title: US-09-653-755A-6

Perfect score: 2487

Sequence: 1 EVQLQSGPELVKPGASVMI.....YLKTTISRPKSGHHNNHH 462

Scoring table:

BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 219241 seqs, 76174552 residues

Total number of hits satisfying chosen parameters: 219241

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%
Maximum Match 100%

Listing first 45 summaries

Database :

1: PIR:68:*
2: pir1:*
3: pir2:*
4: pir3:*
5: pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	2190.5	88.1	474	1 G2MS11	Ig gamma-2b chain
2	2135.	85.8	475	2 S01321	Ig gamma-2b chain
3	1835.	73.8	469	2 S37483	Ig gamma-2a chain
4	1832.5	73.7	446	2 S40295	Ig gamma-2a chain
5	1797	72.3	405	1 G2MSBM	Ig gamma-2b chain
6	1439	57.9	444	2 PCA436	monoclonal antibod
7	1419	57.1	330	1 G2MSA	Ig gamma-2a chain
8	1414	56.9	399	1 G2MSAM	Ig gamma-2a chain
9	1385.5	55.7	335	1 G2MSAB	Ig gamma-2a chain
10	1326.5	53.3	333	2 PS0018	Ig gamma-2b chain
11	1321.5	53.1	472	2 S31459	Ig gamma-1 chain
12	1286.5	51.7	470	2 S22080	Ig heavy chain pre
13	1202.5	48.4	329	2 S00847	Ig gamma-2c chain
14	1170	47.0	329	1 G3MSC	Ig gamma-3 chain C
15	1159	46.6	338	1 G3MSM	Ig gamma-3 chain C
16	1150	46.2	324	1 G1MS	Ig gamma-1 chain C
17	1145	46.0	334	1 G1MSM	Ig gamma-1 chain C
18	1112	44.7	326	2 PS0017	Ig gamma-1 chain C
19	1100	44.2	322	2 PS0019	Ig gamma-1 chain C
20	1087	43.7	350	1 GHU	Ig gamma-1 chain C
21	1080.5	43.4	333	1 GHHR	Ig gamma-1 chain C
22	1080.5	43.4	329	1 G2GP	Ig gamma-2 chain C
23	1072.5	43.1	377	2 A60764	Ig gamma-2 chain C
24	1072.5	43.1	377	2 A23511	Ig gamma-3 chain C
25	1059	42.6	326	1 G2HU	Ig gamma-2 chain C
26	1058	42.5	328	2 I47159	Ig gamma-4 chain C
27	1054.5	42.4	328	2 I47160	Ig gamma-2b chain
28	1049	42.2	328	2 I47161	Ig gamma-3 chain C
29	1028	41.3	328	2 I47161	Ig gamma-3 chain C

30	1023.5	41.2	308	2 C30554	Ig heavy chain C r
31	1022	41.1	328	2 I47158	Ig gamma-1 chain c
32	1014.5	40.8	246	2 S38950	Ig gamma chain - m
33	1008.5	40.6	548	2 S38864	Ig epsilon chain C
34	987.5	39.7	327	2 S06611	Ig gamma-2 chain C
35	918.5	36.9	374	2 S69339	Ig heavy chain V r
36	884	35.5	277	2 I47162	Ig gamma-4 chain c
37	855.5	34.4	231	2 PCA155	Ig gamma-2b chain c
38	819	32.9	549	2 S04845	Ig heavy chain pre
39	818.5	32.9	627	2 S14683	Ig mu chain precu
40	781.5	31.4	255	4 S31866	Ig gamma-1 chain C
41	778.5	31.3	221	2 S49220	Ig gamma-1 chain -
42	778	31.3	214	2 PCA202	monoclonal antibod
43	774.5	31.1	213	2 S68213	Ig heavy chain (Ma
44	774.5	31.1	234	2 PT0207	Ig gamma chain C r
45	771.5	31.0	289	1 G3H0W1	Ig gamma-3 heavy c

ALIGNMENTS

```
RESULT 1
G2MS11
Ig gamma-2b chain - mouse
C:Species: Mus musculus (house mouse)
C>Date: 31-Mar-1980 #sequence_revision 01-Dec-2000 #text_change 01-Dec-2000
C:Accession: S25057; A02157; A26235; A26232; A53598
R:Fischer, R.; Voss, A.; Niersbach, W.; Munziker, W.; Hirsch, R.J.; Kreuzaler, F.
Submitted to the EMBL Data Library, July 1992
A:Description: Production of a Tobacco mosaic virus (TMV) inactivating neotop specific
A:Reference number: S25057
A:Accession: S25057
A>Status: preliminary
A:Molecule type: mRNA
A:Residues: 1-474 <FIS>
R:Yamawaki-Kataoka, Y.; Kataoka, T.; Takahashi, N.; Oyata, M.; Honjo, T.
Nature 283, 786-789, 1980
A:Title: Complete nucleotide sequence of immunoglobulin gamma2b chain gene cloned fro
A:Reference number: A02157; MUID:80120716
A:Accession: A02157
A:Contents: a allele
A:Molecule type: DNA
A:Residues: 138-161, 'L', 163-189, 'FP', 193-474 <YAM>
A:Cross-references: GB:J00461
R:Tucker, P.W.; Marcu, K.B.; Slightom, J.L.; Blattner, F.R.
Science 206, 1299-1303, 1979
A:Title: Structure of the constant and 3' untranslated regions of the murine gamma2b
A:Reference number: A26235; MUID:80081501
A:Accession: MPC 11
A:Contents: MPC 11
A:Accession: A26235
A:Molecule type: mRNA
A:Residues: 138-172, 'P', 174-189, 'FP', 193-376, 'T', 378-474 <TUI>
A:Note: Lys-474 is probably removed posttranslationally
R:Tucker, P.W.; Marcu, K.B.; Newell, N.; Richards, J.; Blattner, F.R.
Science 206, 1303-1306, 1979
A:Title: Sequence of the cloned gene for the constant region of murine gamma2b immuno
A:Reference number: A26232; MUID:80081502
A:Accession: A26232
A:Molecule type: DNA
A:Residues: 138-172, 'P', 174-189, 'FP', 193-376, 'T', 378-474 <TUI>
R:Ollo, R.; Rougeon, F.
Nature 296, 761-763, 1982
A:Title: Mouse immunoglobulin allotypes: post-duplication divergence of gamma2a and g
A:Reference number: A26233; MUID:82173203
A:Accession: A26233
A:Contents: b allele
A:Molecule type: DNA
A:Residues: 138-161, 'L', 163-189, 'FP', 193-300, 'R', 302-331, 'A', 333-437, 'DI', 440-474 <OL
R:Kim, H.; Yamaguchi, Y.; Masuda, K.; Matsunaga, C.; Yamamoto, K.; Irimura, T.; Takah
J. Biol. Chem. 269, 12345-12350, 1994
```

A:Title: O-glycosylation in hinge region of mouse immunoglobulin G2b.
A:Reference number: A53598; MUID:94216359
A:Accession: A53598
A:Status: preliminary
A:Molecule type: protein
A:Residues: 234-251 <KIM>
C:Comment: The a allele sequence is shown.
C:Genetics:
A:Introns: 138/1; 236/1; 258/1; 368/1
C:Complex: An immunoglobulin heterotrimer subunit consists of two identical light (kappa) chain disulfide bonds. In some cases, such as IgA and IgM, the subunits associate into 16 C:Superfamily: immunoglobulin C region; immunoglobulin homology
C:Keywords: alternative splicing; duplication; glycoprotein; heterotrimer; immunoglobulin
F:157-222/Domain: immunoglobulin homology <IM1>
F:236-257/Region: hinge
F:281-350/Domain: immunoglobulin homology <IM2>
F:387-454/Domain: immunoglobulin homology <IM3>
F:152/Disulfide bonds: interchain (to light chain) #status predicted
F:164-220,288-348,394-452/Disulfide bonds: #status predicted
F:247,250,253,256/Disulfide bonds: interchain (to heavy chain) #status predicted
F:324/Binding site: carbohydrate (Asn) (covalent) #status predicted

Query Match 88.1%; Score 2190.5; DB 1; Length 474;
Best Local Similarity 91.2%; Pred. No. 4.1e-123;
Matches 415; Conservative 10; Mismatches 29; Indels 1; Gaps 1;

```
QY 1 EVOLQSGPELVKPGASVAMISCRSAVTEFTENTVHWKQSHGESLEWIGINPYGGSIF 60
DB 20 EVOLQSGPELVKPGASVAMISCRSAVTEFTENTVHWKQSHGESLEWIGINPYGGSIF 79
QY 61 SPKFKGKATLVYDKSSSTAYMELRSLTSDSAVYVCARAGAYFPDYGCGTTLVYSAK 120
DB 80 NEKFKGKATLVYDKSSSTAYMELRSLTSDSAVYVCARAGAYFPDYGCGTTLVYSAK 139
QY 121 TTPPSVYPLAPGCGDTGSSVTLGCLVKGFPESVTVTNSSGSLSSVHTF-PALLQSL 179
DB 140 TTPPSVYPLAPGCGDTGSSVTLGCLVKGFPESVTVTNSSGSLSSVHTLSQLQSL 199
QY 180 YTMSSSVYVPSSTWPSQVTCVAHPASTTYDKKLEPSGISTINPCPCKECHKCPA 239
DB 200 YTMSSSVYVPSSTWPSQVTCVAHPASTTYDKKLEPSGISTINPCPCKECHKCPA 259
QY 240 NLEGGPSVFIFPPNKKVLYMLSLTPKVTGVVVDVSEDDPDVOISMFVNVVEVHTAQTOT 299
DB 260 NLEGGPSVFIFPPNKKVLYMLSLTPKVTGVVVDVSEDDPDVOISMFVNVVEVHTAQTOT 319
QY 300 REDVNSTIRVSTLPIQHDMMSGKEFKCKVNNKDLPSPIERTISKIGLVAPQVYILP 359
DB 320 REDVNSTIRVSTLPIQHDMMSGKEFKCKVNNKDLPSPIERTISKIGLVAPQVYILP 379
QY 360 PPAEQLSRKDVSLTCLVGFNPBGDISVEMTNGHTEENKDTAPAVLDSGSIYFSKLM 419
DB 380 PPAEQLSRKDVSLTCLVGFNPBGDISVEMTNGHTEENKDTAPAVLDSGSIYFSKLM 439
QY 420 KTSKWEKTDSPFCNVNHEGLKNYLLKTTISRSPGK 454
DB 440 KTSKWEKTDSPFCNVNHEGLKNYLLKTTISRSPGK 474
```

RESULT 2
Ig gamma-2b chain precursor - mouse
C:Species: Mus musculus (house mouse)
C:Date: 30-Sep-1989 #sequence_revision 30-Sep-1989 #text_change 23-Jul-1999
C:Accession: S01321

R:de Waale, P.; Feys, V.; van de Voorde, A.; Molemans, F.; Fiers, W.
Eur. J. Biochem. 176, 287-295, 1988
A:Title: Expression in non-Lymphoid cells of mouse recombinant immunoglobulin directed at

A:Reference number: S01320; MUID:88329081
A:Accession: S01321
A:Molecule type: mRNA
A:Residues: 1-475 <DEI>

A:Cross-references: EMBL:X13188; NID:951780; PIDD:CAA31580.1; PID:951781
A>Note: this sequence was determined from the differentiated gene
C:Superfamily: immunoglobulin C region; immunoglobulin homology
C:Keywords: immunoglobulin
F:1-19/Domain: signal sequence #status predicted <SIG>
F:20-475/Product: Ig gamma-2b chain #status predicted <KAT>
F:159-223/Domain: immunoglobulin homology <IMM>

Query Match 85.8%; Score 2135; DB 2; Length 475;
Best Local Similarity 88.4%; Pred. No. 8.1e-120;
Matches 403; Conservative 15; Mismatches 36; Indels 2; Gaps 1;

```
QY 1 EVOLQSGPELVKPGASVAMISCRSAVTEFTENTVHWKQSHGESLEWIGINPYGGSIF 60
DB 20 EVOLQSGPELVKPGASVAMISCRSAVTEFTENTVHWKQSHGESLEWIGINPYGGSIF 79
QY 61 SPKFKGKATLVYDKSSSTAYMELRSLTSDSAVYVCARAGAYFPDYGCGTTLVYSS 118
DB 80 NEKFKGKATLVYDKSSSTAYMELRSLTSDSAVYVCARAGAYFPDYGCGTTLVYSSA 139
QY 119 AKTTPSVYPLAPGCGDTGSSVTLGCLVKGFPESVTVTNSSGSLSSVHTFPALLQSG 178
DB 140 AKTTPSVYPLAPGCGDTGSSVTLGCLVKGFPESVTVTNSSGSLSSVHTFPALLQSG 199
QY 179 LYTMSSSVYVPSSTWPSQVTCVAHPASTTYDKKLEPSGISTINPCPCKECHKCPA 238
DB 200 LYTMSSSVYVPSSTWPSQVTCVAHPASTTYDKKLEPSGISTINPCPCKECHKCPA 259
QY 239 PNLGGPSVFIFPPNKKVLYMLSLTPKVTGVVVDVSEDDPDVOISMFVNVVEVHTAQTOT 298
DB 260 PNLGGPSVFIFPPNKKVLYMLSLTPKVTGVVVDVSEDDPDVOISMFVNVVEVHTAQTOT 319
QY 299 HREDVNSTIRVSTLPIQHDMMSGKEFKCKVNNKDLPSPIERTISKIGLVAPQVYIL 358
DB 320 HREDVNSTIRVSTLPIQHDMMSGKEFKCKVNNKDLPSPIERTISKIGLVAPQVYIL 379
QY 359 PPAEQLSRKDVSLTCLVGFNPBGDISVEMTNGHTEENKDTAPAVLDSGSIYFSKLM 418
DB 380 PPAEQLSRKDVSLTCLVGFNPBGDISVEMTNGHTEENKDTAPAVLDSGSIYFSKLM 439
QY 419 KTSKWEKTDSPFCNVNHEGLKNYLLKTTISRSPGK 454
DB 440 KTSKWEKTDSPFCNVNHEGLKNYLLKTTISRSPGK 475
```

RESULT 3
S37483

Ig gamma-2a chain - mouse
C:Species: Mus musculus (house mouse)
C:Date: 06-Jan-1995 #sequence_revision 06-Jan-1995 #text_change 23-Jul-1999
C:Accession: S37483

R:Ducaucel, F.F.D.
Submitted to the EMBL Data Library, February 1993
A:Reference number: S37483
A:Accession: S37483

A:Molecule type: mRNA
A:Residues: 1-469 <DDUC>
A:Cross-references: EMBL:X70423; NID:9406252; PIDD:CAA49868.1; PID:9406253
C:Superfamily: immunoglobulin C region; immunoglobulin homology
C:Keywords: immunoglobulin
F:276-345/Domain: immunoglobulin homology <IMM>

Query Match 73.8%; Score 1835; DB 2; Length 469;
Best Local Similarity 75.7%; Pred. No. 5.3e-102;
Matches 345; Conservative 44; Mismatches 59; Indels 8; Gaps 3;

```
QY 1 EVOLQSGPELVKPGASVAMISCRSAVTEFTENTVHWKQSHGESLEWIGINPYGGSIF 60
DB 20 QIOLQSGPELVKPGASVAMISCRSAVTEFTENTVHWKQSHGESLEWIGINPYGGSIF 79
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Qy	61	SPKEFGKATLTYYDKSSSTAYMYMELRSLTSEDSAVVYCARAG--AYEDYWGCGTILYSS	118
Db	80	NNENFGKALLTYDTSSSTAYMYQLSITSEDTIAYVYCARAMGATALLDYGCGTILYSS	139
Qy	119	AKTTPPSVYPLAPGCGDITGSSVTLGCLVKGYPESVYWTWNGSLSSVHFPPALLOG	178
Db	140	AKTTPPSVYPLAPVCGDITGSSVTLGCLVKGYPPEVYITLWNGSLSSVHFFPALOSD	199
Qy	179	LYTMSSSVTVPSSTWPSQTVTCVSAHPASSTYVDRKLPESGDITSTINPCRECHKCPA	238
Db	200	LYTLSSSVTVWSSWPSQGITCNVAHPASSTKVDRKIEPRGP--TLKPCPC---KCPA	253
Qy	239	PNLEGGPSVFITPPNKKDYLMISLPKVTQVYVYSEDDPDVQISFNVNVEVHTAQOT	298
Db	254	PNLGGPSVFITPPKIKDYLMLISPIYTCVYVDSEDDPDVQISFNVNVEVHTAQOT	313
Qy	299	HREDNSTIRAVSTPLIOHODMMSGKEFKCKVNNKDLPSPIRTISKIGLARAOVYL	358
Db	314	HREDNSTIRVVSALPLIOHODMMSGKEFKCKVNNKDLPAPIRTISKIPGSYRAPOVYL	373
Qy	359	PPPAOLSRKDYSLNCLVYVGNPBGDISVEMTNSNGHTEENYKDTAVLDDSDGSYFTSKLN	418
Db	374	PPPEDEMTKQYTLFCWYTDPMFEDIVYEMTNNKGTELNYKNTEPYLDDSDGSYFMTSKLR	433
Qy	419	MKTSWEKTDSCVNRHEGLKNYLLKTTISRSPGK	454
Db	434	VEKKMMVERNSYCSVHEGLHNNHTTKTSFSTRPK	469

```

QY 121 TTPBSVYFLAECGCGTTSSSVTLGCLVKGYPPESTVYWMNGSLSSVHTFPALLOSLX 180
Db 120 TTAPSVYPLAPCGGTGSSVYTLGCLVKGYPPEVPTLTWMNGSLSSGHTFPAYLOSLY 179
QY 181 TMSSTVTPSSWMPGQTGCSVAHNPASSTYDCKLEPSGPISTINPCBPCKECHKCPAPN 240
Db 180 TLSSSVYVTSSTWMPGQSITCNVAHPASSTKYDKLEPGR--TKPCPPC---KCAPN 233
QY 241 LEGGSVFTFPINIDVLMISLTPKVTCVVVDSEDDPDVQISMFVNVEVHTAQTQHR 300
Db 234 LLGGSVFTFPKKIDVLMISLSPVTCVVVDSEDDPDVQISMFVNVEVHTAQTQHR 293
QY 301 EDYNSTIRVSTLPIQHDWMSGKEFKCKVNNKDLPSDIERTISKINGLVAPQVYILPP 360
Db 294 EDYNSTLRVYSLPIQHDWMSGKEFKCKVNNKDLPAIERIISKPKSVAPQVYILPP 353
QY 361 PAELSKRDVSLTCLVGNFGEDISVEWTSNGHTBEANTKDPAYLUDSGSFITYSKLMMK 420
Db 354 PEEETKQAVTLCTCAVTFMFPEDIVYEWTNMGKTELAKNTEPVLDSDGSFYFMSKLEVE 413
QY 421 TSKMEKTDSESCNVRHEGLKANYLLKKTISRSPG 453
Db 414 KKNVERNYSVCSVYHEGLNHNHTTKSFSPG 446

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:: : :: ||| | ||| | : : ||| | |
Db      434 VEKKWVERNSTSCSVYHGLHNHHHTTFSFSPGK    469

RESULT      4
S40295
Ig gamma-2a chain (mbp735) - mouse
C:Species: Mus musculus (house mouse)
C:Date: 07-Apr-1994 #sequence_revision 07-Apr-1994 #text_change 16-Jul-1999
C:Accession: S40295
R:Klebert, S.; Kitzlin, H.D.; Zimmermann, B.; Vaesen, M.; Frosch, M.; Weisgerber, C.; B
submitted to the EMBL Data Library, January 1993
A:Description: Primary structure of the murine monoclonal IgG2a antibody mbp735 against
A:Reference number: S40295
A:Accession: S40295
A:Molecule type: protein
A:Residues: 1-446 <KLE>
C:Genetics:
A:Map position: 12
C:Superfamily: immunoglobulin C region; immunoglobulin homology
C:Keywords: disulfide bond; glycoprotein; immunoglobulin; pyroglyutamic acid
F:1-446/Product: Ig gamma-2a chain status experimental <MAT>
F:1-117/Domain: V-D-J region <VDJ>
F:118-446/Domain: C region <CHR>
F:118-214/Domain: C1 region <CH1>
F:215-230/Region: hinge
F:231-340/Domain: C2 region <CH2>
F:341-446/Domain: C3 region <CH3>
F:360-427/Domain: immunoglobulin homology <IMV>
F:1/Modified site: pyrrolidone carboxylic acid (Gln) #status experimental
F:32-96,144-199,261-371,367-425/Disulfide bonds: #status predicted
F:133/Disulfide bonds: interchain (to light chain) #status predicted
F:224,227,229/Disulfide bonds: interchain #status predicted
F:297/Binding site: carbohydrate (Asn) (covalent) #status experimental

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	Query Match	73.7%;	Score 1832.5;	DB 2;	Length 446;
	Best Local Similarity	75.9%;	Pred. No. 7.1e-102;		
	Matches 344;	Conservative 44;	Mismatches 58;	Indels 7;	Gaps 3;
Oy	1	EVOLOOSGPELTKPGASVWISCRTSAYPTENTYHHVKVOSHESLEWMIGINPYGGSI F	60		
	:	:::::::::::::::	:::::	: ::	: :: ::
Db	1	QIOLDOSGELVRPGASVATSCSKASYITFDYYIIHVKRPRGEGLMIMTIPGSNTNY	60		
Oy	61	SFKFGKATLIYDKSSSTRAYMELRSITSEDSAVYYCARAGAIYFEDYWGOGTTLVSSAK	120		
	:	:::::::::::::::	:::::	: ::	: :: ::
Db	61	NKFPGKATLIYDSTSSSTRYMQLSITSEDSAVYFCFA-RGGKRFAMDYMGOTGSTVTSSAK	119		

```

RESULT 5
G2MSM
Ig gamma-2b chain C region, membrane-bound form - mouse
C:Species: Mus musculus (house mouse)
C:Date: 17-Dec-1992 #sequence_revision 31-Mar-1991 #text_change 16-Jul-1999
C:Accession: C02154; A02158; B02157
R:Yamawaki-Katoka, Y.; Nakai, S.; Miyata, T.; Honjo, T.
Proc. Natl. Acad. Sci. U.S.A. 79, 2623-2627, 1982
A:Title: Nucleotide sequences of gene segments encoding membrane domains of immunoglobulin heavy chain C region
A:Reference number: A02154; MUID:82222190
A:Molecule type: DNA
A:Residues: 335-405 <YAM>
A:Cross-references: GB:J00462
R:Rogers, J.; Choi, E.; Souza, L.; Carter, C.; Word, C.; Kuehl, M.; Eisenberg, D.; Warr, G.
Cell 26, 19-27, 1981
A:Title: Gene segments encoding transmembrane carboxyl termini of immunoglobulin gamma2b chain
A:Reference number: A02158; MUID:82115295
A:Accession: A02158
A:Molecule type: DNA
A:Residues: 335-378 <ROG>
A:Note: the translation of the first exon of the membrane-bound segment is given
R:Yamawaki-Katoka, Y.; Katoka, T.; Takahashi, N.; Obata, M.; Honjo, T.
Nature 283, 786-789, 1980
A:Title: Complete nucleotide sequence of immunoglobulin gamma2b chain gene cloned from fetal mouse
A:Reference number: A02157; MUID:80120716
A:Contents: a allele
A:Accession: B02157
A:Molecule type: DNA
A:Residues: 1-335, 'K' <YA2>
C:Comment: The sequence of residues 1-334 was assumed to be identical with the corresponding sequence of the gamma2b chain gene.
C:Comment: Cell lines producing IgG contain two mRNA species for Ig gamma chains. They had it contains an alternative 3' end, encoded in separate exons, that is homologous to the gamma2b chain.
C:Genetics:
A:Introns: 1/1; 98/1; 120/1; 230/1; 335/1; 378/3
C:Complex: An immunoglobulin heterotetramer subunit consists of two identical light (L) and two identical heavy (H) chains. In some cases, such as IgA and IgM, the subunits associate into tetramers.
C:Superfamily: immunoglobulin C region; immunoglobulin homology
C:Keywords: alternative splicing; duplication; glycoprotein; heterotetramer; immunoglobulin
F:143-212/Domain: immunoglobulin homology <IMM>
F:335-369/Domain: transmembrane #status predicted <TM>
F:370-405/Domain: intracellular #status predicted <INT>
F:186/Binding site: carbohydrate (Asn) (covalent) #status predicted

```


Query Match 56.9%; Score 1414; DB 1; Length 399.

```
OY 119 AKTTPSYVYPLAPGCGDGTGSSVTLGCLVKGKVFPEPSVTVVNNSSLSSTVFTHALLQSG 178
|||||
DB 1 AKTTPSYVYPLAPCGDGTGSSVTLGCLVKGKVFPEPSVTVVNNSSLSSTVFTHALLQSG 60
179 LYTSSSVTVVSSVWSPQTVTCVAHPASSVTVVDKLEKSPGPISTINCPCKECHKCPA 238
|||||
DB 61 LYTSSSVTVVSSVWSPQSTICNVANHPASSVTVVDKLEKRP--TIRKPCPC----KCPA 114
229 PNLGGPSVFIFFPPNIKDYLMISLTPKVTGVVVDSEDDPDVQISWENNVNVEVHTAQOT 298
|||||
DB 115 PNLGGPSVFIFFPKIKDYLMISLSPITGVVVDSEDDPDVQISWENNVNVEVHTAQOT 174
OY 299 HREDYNSTRVAVSTLPIDHDMGSGKEFKCKVNNKDLPSPIERTISKGIYRAPDQVYL 358
|||||
DB 175 HREDYNSTRVAVSALPIIDHDMGSGKEFKCKVNNKDLPAPIERTISKGIYRAPDQVYL 234
359 PPAPAEOLSRKDVSLTCLVAVGPNPGDISVEWTSNGHTEENYKDTAPVLDSDSYIYSKLN 418
|||||
DB 235 PPPEEMKAKQVLTLCWVTDPEMDIYVEWMTNNGKTELANTPEVLDSDSYIYSKLR 294
OY 419 MKTSKWEKTDSCFSCNVREGLKNYYLAKTIRSPCK 454
:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|
DB 295 VEKRNVERNYSQSVYHEGLHNHTTKSFSTRGK 330

RESULT 8
G2MSAM
Ig gamma-2a chain C region, membrane-bound form - mouse
C:Species: Mus musculus (house mouse)
C:Date: 19-Feb-1994 #sequence,revision 31-Mar-1991 #text_change 16-Jul-1999
C:Accession: A02154; B32657, I57809
R:Yamawaki-Kataoka, Y.; Nakai, S.; Miyata, T.; Honjo, T.
Proc. Natl. Acad. Sci. U.S.A. 79, 2623-2627, 1982
A:Title: Nucleotide sequences of gene segments encoding membrane domains of immunoglobulin
A:Reference number: A02154; MUID:82222190
A:Accession: A02154
A:Molecule type: DNA
A:Residues: 329-399 <YAM>
A:Cross-references: GB:J00471
R:Note: The sequence was determined from the germ-line gene
R:Yamawaki-Kataoka, Y.; Miyata, T.; Honjo, T.
Nucleic Acids Res. 9, 1365-1381, 1981
A:Title: The complete nucleotide sequence of mouse immunoglobulin gamma 2 A gene and env
A:Reference number: A32657; MUID:81198976
A:Accession: B32657
A:Molecule type: DNA
A:Residues: 1-329, 'K' <YA2>
R:Hall, B.; Milcarek, C.
Mol. Immunol. 26, 819-826, 1989
A:Title: Sequence and polyadenylation site determination of the murine immunoglobulin gamma
A:Reference number: I57809; MUID:90097953
A:Accession: I57809
A:Status: preliminary; translated from GB/EMBL/DBJ
A:Molecule type: DNA
A:Residues: 373-399 <RES>
A:Cross-references: GB:K35032; NID:g194478; PID:AAA37919.1; PID:g387217
C:Comment: The sequence of residues 1-328 was assumed to be identical with the corresponding
C:Comment: Cell lines producing IgG contain two mRNA species for Ig gamma chains. The major
C:Comment: hat it contains an alternative 3' end, encoded in separate exons, that is homologous with
C:Genetics:
A:Introns: 1/1; 98/1; 114/1; 224/1; 329/1; 372/1
C:Complex: An immunoglobulin heterotrimer consists of two identical light (kappa)
C:Chain disulfide bonds. In some cases, such as IgA and IgM, the subunits associate into dimer
C:Specificity: Immunoglobulin C region; Immunoglobulin homology
C:Keywords: alternative splicing; duplication; glycoprotein; heterotrimer; immunoglobulin
F:137-206/Domain: immunoglobulin homology <IMM>
F:346-363/Domain: transmembrane #status predicted <TM>
F:364-399/Domain: intracellular #status predicted <INT>
F:180/Binding site: carbohydrate (Asn) (covalent) #status predicted
```

[illegible]

[illegible]

```

RESULT 10
PS0018
Ig gamma-2b chain C region - rat
C:Species: Rattus norvegicus (Norway rat)
C:Date: 07-Jun-1990 #sequence_revision 07-Jun-1990 #text_change 16-Jul-1999
C:Accession: PS0018; B25541
R:Brueggemann, M.
Gene 74, 473-482, 1988
A:Title: Evolution of the rat immunoglobulin gamma heavy-chain gene family.
A:Reference number: PS0017; MUID:89232738
A:Accession: PS0018
A:Molecule type: DNA
A:Residues: 1-333 <BRU>
R:Brueggemann, M.; Free, J.; Diamond, A.; Howard, J.; Cobbold, S.; Waldmann, H.
Proc. Natl. Acad. Sci. U.S.A. 83, 6075-6079, 1986
A:Title: Immunoglobulin heavy chain locus of the rat: striking homology to mouse antibody
A:Reference number: A25941; MUID:86287397
A:Accession: B25941
A:Status: preliminary
A:Molecule type: DNA
A:Residues: 227-333 <BR2>
C:Genetics:
A:Introns: 96/1; 117/1; 227/1
C:Superfamily: immunoglobulin C region; immunoglobulin homology
C:Keywords: immunoglobulin
F:20-82/Domain: immunoglobulin homology <IMM>

```

	Query Match	53.3%	Score 1326.5;	DB 2;	Length 333;	
	Best Local Similarity	73.6%;	Pred. No.5.8e-72;			
	Matches 248; Conservative	34;	Mismatches 50;	Indels 5;	Gaps 3;	
QY	AKTTPPSVYPPLAPGCGDGTSSVTLCGLCYKGFPESESVYTNNMGSLSSTSVHFFPALDSG	178				
Dd	AQTNPASVYPPLAPGCGDGTSSVTTLGCLCYKGFPEPVITYTNMGSLSDVHTFPAYLQSG	60				
QY	LYTMSSSVTVPBSTWPSQTVTCVAHPASSTTVDKKLF-PSPGISITINCPCKCKCHKCP	237				
Dd	LYTLTTSVT--SFTWPQTVTCNVAHPASSFTVKDKVERRNGIG-HKCPTCPICHKCP	116				
QY	APNLGGCVSFTEFPPNIKIDVLMISLTLPKYVCVVYDVSEDDPVQIISWFVNVEVHTAQO	297				
Dd	VPELGGVSVEFTPCKPKDILLISONAKVTCVVYDVSEEDPVPQFSWFVNVEVHTAQO	176				
QY	THREYNSTIVSYTLPIQHODMMGSKFEKCKVNNKKDLPSPLERTISKIKGLVRAPOYTI	357				
Dd	PREQYNSTFRVYSALPIQHODMMGSKFEKCKVNNKKALPSPLERTISKFKGLVRPOYYV	236				
QY	LPPAEOLSRDVLSTLCVWGPNPGDISWEVMSNGTHEENYKDPAVLDSDSYFLYSKL	417				
Dd	KGPPEQLTEDVSTLCISGLPNDICGVEMTNSNHIEKNKNTPEVADSDSFFMYSL	296				

```
OY      418 NAKTSKEWETSFSCNVRHSELKNLYLKTISRSPGK 454
```

|::||:

```
Db      297 NVSRMRDRAPFVCSVVHEGLHNHHVEKSISRPFGK 333
```

RESULT 11
S31459

Ig gamma-1 chain - sheep (fragment)
 C:Species: Ovis orientalis aries; Ovis ammon aries (domestic sheep)
 C>Date: 13-Jan-1995 #sequence_revision 13-Jan-1995 #text_change 16-Jul-1995
 C:Accession: S31459
 R:Patil, S.; Nau, F.
 submitted to the EMBL Data Library, December 1992
 A:Reference number: S31459
 A:Accession: S31459
 A:Status: preliminary
 A:Molecule type: mRNA
 A:Residues: 1-472 <PAT>
 A:Cross-references: EMBL:X69797
 C:Superfamily: Immunoglobulin C region; immunoglobulin homology
 C:Keywords: immunoglobulin
 F:277-346/Domain:Immunoglobulin homology <IMM>

Query Match	53.1%;	Score 1321.5;	DB 2;	Length 472;
Best Local Similarity	54.8%;	Pred. No. 1.7e-71;		
Matches 255;	Conservative 74;	Mismatches 115;	Indels 21;	Gaps 8;

QY	1	EVOLQSGEPRELVKFGAGVMIKICRSFATFFENYHWKQSHGSLKIGINPYGGSIF	60
Db	18	QVRLQESGPRSLATLLOGLVSTCTISGSLANNYGVDWVRQAPKALNELGQ-SCYDEID	76
QY	61	SPFKGKATLTVDKSSSTAYMELKSLTSEDSAYYYCAR-----RAGAY-YEDYWGQGIT	113
Db	77	NPVLKSLSLSTIKDKTSKQVSLTSLTSETEDTAYVYCARVYDSDSHAFAYSYDFMGGL	136
QY	114	LTVASATTPPSVYPLAPPGGDDTGGSVTLGCLVYKGFPESEVYVNMNGLSSSVHTEPA	173
Db	137	ISVLASATTPKRYPLPLTSCGGDTSSSLVTLGCLVSSYMPPEVYVNMNGLISGVHTEPA	196
QY	174	LLQ--SGLVTSSSSVYVPSSTWPSQVYVCVVAHPASSYTVYKKLEPGSPITINPCP-PCR	231
Db	197	ILQSGGLYSLSSVYTVAPVTSAGQTFICNVAHNPASSYTKVDKRVKPG-----CPDPCK	248
QY	232	ECHKCAPNLBGGPSVIFPPPNIKDVLMLSTRKYTCVYVDSSEDDPDVQISMFVNVEX	291
Db	249	HC-RCPPPELPLGGPSVIFPPPKRDTLTIGTFEYVYCVVVDQADPEVQSFNFVNVEX	307
QY	292	HTAQTQTHREDYNTIIVVSTLPIQIHDMMGSGEFKCKVNNKQDLPSPERTIKIGLVR	351
Db	308	KTATKTRERQFNSTFENVYSAALPIQIHDMTGGEFKCKVNNKQDLPSPERTIKIGLVR	367
QY	352	APQVYIILPPPAEQLSRKDVSLTGLVYGFNGDISLEWTSNG--HTEENYKDPAPVILSDG	409
Db	368	EPQYVYVLAPEQELSKSTLSVTCLVYGFYDYIAYEWQKQGESEDEKYGTTTSQIADQG	427
QY	410	SYFLYSKLNKMTSKWETDSFSCNVHREGKANKYLLKTTISRSGCK	454
Db	428	SYFLYSRLRVKDNKSWQEGDGYACVYVMEALHNHYTKQKSLSPKPG	472

RESULT 12

Ig heavy chain precursor (B/MT 4A.17.H5.A5) - bovine
 N:Alternate names: Ig gamma-1 chain C region (clone 8.10)
 C:Species: Bos primigenius taurus (cattle)
 C:Date: 06-Jan-1995 #sequence_revision 06-Jan-1995 #text_change 23-Jul-1999
 C:Accession: S22080; S06610; A3103
 R:Sanders, P.G.
 Submitted to the EMBL Data Library, November 1991
 A:Reference number: S22080
 A:Accession: S22080


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QY 241 LEGGPEVFLEPPNIKDVLMISLTPKVTGVVVDSEDDPDVQISWFEVNNVEHTAQTQTHR 300
: ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
DB 116 ILGGPEVFLEPPNIKDVLMISLTPKVTGVVVDSEDDPDVQISWFEVNNVEHTAQTQPRE 175
QY 301 EDYNSTIRVSTLPIQHODWMSGKEFEKCKVNNKDLPSPIERTISKIGLVRAPOVYITLP 360
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
DB 176 AQYNSTFRVVSALPIQHODWMSGKEFEKCKVNNKALPAPIERTISKPKGRAQTPPYITTP 235
QY 361 PAEQLSRKDVSLTCLVGVGNPDISVEWTSNGHTEENYKDTAPVLDSDGSYFYISKLNK 420
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
DB 236 PREQMSKKRVSLTCLVTFNFESEALISVEWERNGELEODYKNTPIILDSGTFLYSKLTVD 295
QY 421 TSKWERTDSFSCNVREHGLKNYYLKKTTISRSPK 454
| : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
DB 296 TDSWLQGEIFTCVSVHEALHNHTQKNLSRSPK 329

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RESULT 15

G3MSM

Ig gamma-3 chain C region, membrane-bound form - mouse

C:Species: Mus musculus (house mouse)

C:Date: 13-Aug-1986 #sequence_revision 31-Mar-1991 #text_change 16-Jul-1999

C:Accession: A02156; A02155

R:Weis, J.A.; Word, C.J.; Kimm, D.; Der-Balan, G.P.; Martinez, H.M.; Tucker, P.W.; Blatt

EMBO J. 3, 2041-2046, 1984

A>Title: Structure analysis of the murine IgG3 constant region gene.

A:Reference number: A02156; MUID:85027161

A:Accession: A02156

A:Molecule type: DNA

A:Residues: 1-398 <WEI>

A:Cross-references: GB:J00451; NID:9194392; PIDN:AAB59655.1; PID:9194433

A>Note: the sequence was determined from the germline gene

R:Komaromy, M.; Clayton, L.; Rogers, J.; Robertson, S.; Kettman, J.; Wall, R.

Nucleic Acids Res. 11, 6775-6785, 1983

A>Title: The structure of the mouse immunoglobulin in gamma-3 membrane gene segment.

A:Reference number: A02155; MUID:84041483

A:Accession: A02155

A:Molecule type: DNA

A:Residues: 328-332, 'G', '334-341, 'Q', '343-387, 'F', '389-398 <KOM>

A:Cross-references: GB:K00688

A>Note: the sequence was determined from the germline gene

C:Genetics: 97/1: 113/1: 223/1: 328/1: 371/3

C:Complex: An immunoglobulin heterotetramer subunit consists of two identical light (kappa)

chain disulfide bonds. In some cases, such as IgA and IgM, the subunits associate into 1a

C:Superfamily: immunoglobulin C region; immunoglobulin homology

C:Keywords: alternative splicing; duplication; glycoprotein; heterotetramer; immunoglobu

F:19-83/Domain: immunoglobulin homology <IM1>

F:97-112/Region: hinge

F:136-205/Domain: immunoglobulin homology <IM2>

F:242-309/Domain: immunoglobulin homology <IM3>

F:346-362/Domain: transmembrane #status predicted <TM>

F:363-398/Domain: intracellular #status predicted <INT>

F:179,322/Binding site: carbohydrate (Asn) (covalent) #status predicted

Query Match 46.6%; Score 1159; DB 1: Length 398;

Best Local Similarity 66.0%; Pred. No. 6,4e-62;

Matches 219; Conservative 33; Mismatches 74; Indels 6; Gaps 1;

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QY 121 TTPPSVYPLAPCGDPTGSSVTLGCLVKGYPESVYVWNSGSLSSSVHTFPALLQSGLY 180
||| ||||| ||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
DB 2 TTAPSVYPLVPCGSDTSGSSVTLGCLVKGYPPEVTVKMNYSALSSGVRTVSSVLSQSGFY 61
QY 181 TMSSSVYVPSSTWPSQTYTCSVAHPASSITVDKLEPSGPSTINPCPPCKECHKCAPAN 240
||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
DB 62 SLSLVTVPSSSTWPSQTYCNAHPASKTELRIEPR-----IPKSTPPGSSCPGN 115
QY 241 LEGGPEVFLEPPNIKDVLMISLTPKVTGVVVDSEDDPDVQISWFEVNNVEHTAQTQTHR 300
: ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
DB 116 ILGGPEVFLEPPNIKDVLMISLTPKVTGVVVDSEDDPDVQISWFEVNNVEHTAQTQPRE 175

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QY 301 EDYNSTIRVSTLPIQHODWMSGKEFEKCKVNNKDLPSPIERTISKIGLVRAPOVYITLP 360
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
DB 176 AQYNSTFRVVSALPIQHODWMSGKEFEKCKVNNKALPAPIERTISKPKGRAQTPPYITTP 235
QY 361 PAEQLSRKDVSLTCLVGVGNPDISVEWTSNGHTEENYKDTAPVLDSDGSYFYISKLNK 420
||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
DB 236 PREQMSKKRVSLTCLVTFNFESEALISVEWERNGELEODYKNTPIILDSGTFLYSKLTVD 295
QY 421 TSKWERTDSFSCNVREHGLKNYYLKKTTISRSP 452
| : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
DB 296 TDSWLQGEIFTCVSVHEALHNHTQKNLSRSP 327

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Search completed: June 18, 2001, 15:32:47
Job time: 165 sec

